5: Schwimmer E-4,5 (1966-1967) 1973
OJ23 Orokaiva OJ23
Mountain Orokaiva

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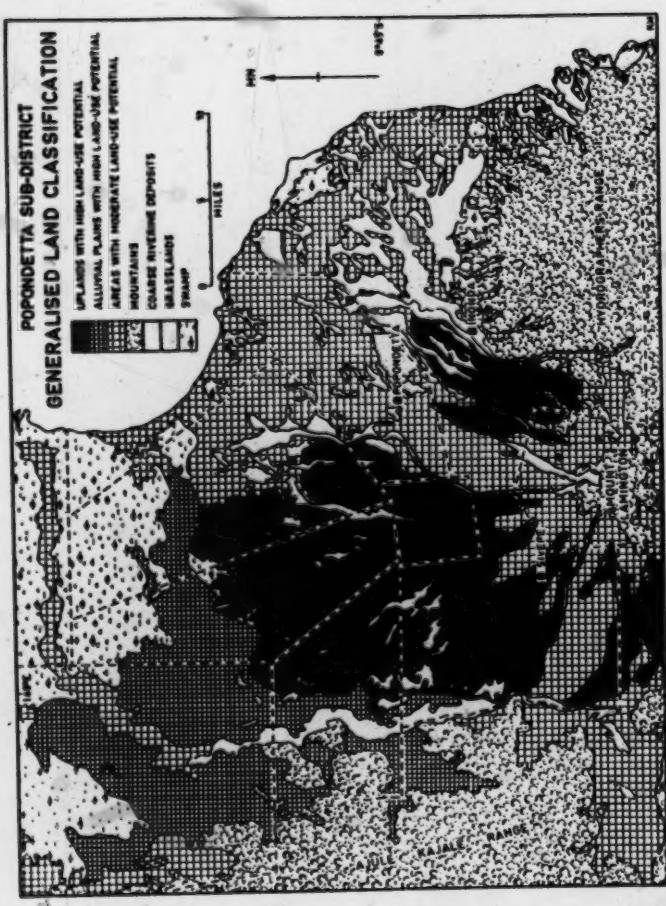

Fig. 1. Popondetta Sub-District: generalised land classification

5: Schwimmer E-4,5 (1966-1967) 1973
OJ23 Orokaiva OJ23
Mountain Orokaiva

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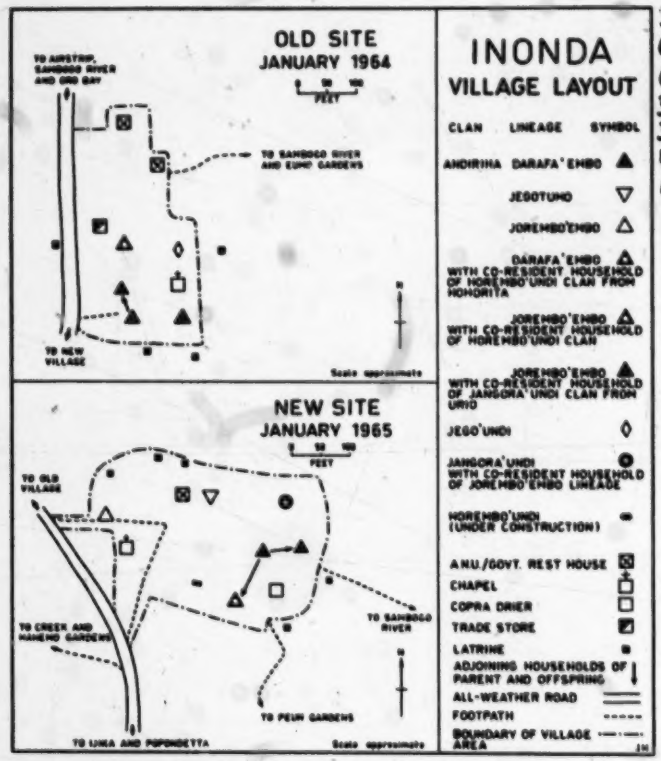

Fig. 4. Inonda village layout.

The leader, a government driver, earned about 65 per cent of the total cash income of the whole village, not only in wages but also through various enterprises on the side. He was the lay preacher as well. The only limit to his influence was the unwillingness of the pagan faction to become involved in 'modern' activities of which he was the champion. 105 622 177

Ecologically, Inonda is characteristic of the alluvial plains region to the east of the mountain. It lies between 200 and 300 feet above sea level, and has a comparatively low rain-fall and long dry periods. Its population density is low: 42 people on a village domain of 2850 acres (less than 10 per square mile). The best Inonda land is 580 acres of coarse-textured recent riverine deposits, covered with forest or regrowth and lying beside the Sambogo and Girua rivers. 133 132 161 162 134 137

5: Schwimmer E-4,5 (1966-1967) 1973
OJ23 Orokaiva OJ23
Mountain Orokaiva

CHAPTER VI

TARO

1. *Introduction*

It has already been pointed out (Chapter II) that taro is the staple food of the Orokaiva and that most of the taro produced is consumed directly by the producing household (over 90 per cent in all villages surveyed). Nonetheless, taro is the most ubiquitous of all Orokaiva objects of exchange: most households give some of it away every day and it is part of the conventional set of gifts that change hands on virtually every ceremonial occasion.

It is the purpose of this chapter to show that taro has all the characteristics of an object of mediation in the sense in which the term was used in the discussion on land. In particular, man identifies himself with taro, there is a series of myths which validate this identification, and these myths indicate the special significance of taro gifts. A wide range of social relations are mediated through taro gifts. Their main purpose is usually the mediating of social relations rather than the setting up of a claim for a specific return gift. In this respect again taro and land gifts resemble one another.

In his discussion of 'Reciprocity and Food', Sahlins (1965: 170–4) takes very

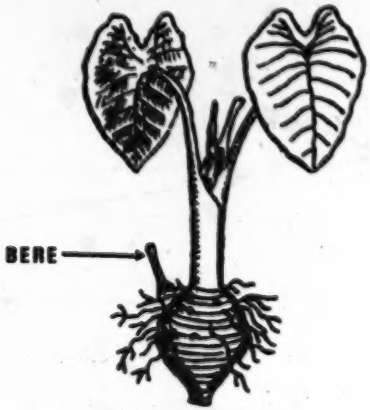

Fig. 7. *Colocasia esculenta* (taro).

7: Rimoldi et al. E,I-5 (1962-1963) 1966 OJ23 Orokaiva OJ23
Mountain Orokaiva
Sivepe

MAP 1

102
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361
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433 The C.S.I.R.O. (1954:12) reported that a wide range of annual and perennial crops which will grow at altitudes up to approximately 1,500 ft and do not require a marked dry season could be grown successfully. The report commented that the whole land system is a very good agricultural area and that this is reflected in the relatively dense population,

> a factor which under the present system of native agriculture will influence the extension of European agriculture. The potentialities of the area, however, far exceed the present land use, which means there is scope in this area for the successful application of extension work directed to the improvement of native agriculture and horticulture.

137 The natural vegetation of the area is a rainforest climax (Pometia pinnata-chisocheton sp. Alliance), of which very little remains. A belt of primary and secondary rainforest separates the settlements on the mountain slopes from their northern neighbours but the area south of this belt is mostly covered with more recent secondary growth in various stages of regeneration after cultivation. Isolated patches of 'kunai' grass occur (mainly Saccharum spontaneium, with some Ropbelia, Imperata spp.)[1] but their area is insignificant by comparison with the grasslands found on the Orokaiva plains.

b. The cultivation cycle

132 Over a period of 8 years the average monthly rainfall has ranged from 9.6, 7.9 and 8.2 inches in June, July and August (when rain falls about 15 days per month) to 20.9, 16.8 and 17 inches in December, January and February (with 22 wet days per month). The coefficient of seasonal variation used by Brookfield and Brown (1963:20) indicates only slight seasonal variability in the area.[2] [241] An occasional brief drought is possible at any time, but with good soil, and no marked dry season, conditions for the growth of subsistence crops are usually favourable throughout the year and new gardens can be made as needed.[3]

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[1] District Agricultural Officer: personal communication.

[2] The coefficient of seasonal variation was 0.30. This measure is obtained by calculating from rainfall figures the standard deviation of monthly means from the mean of the monthly means and then dividing the standard deviation by the mean of the monthly means.

[3] We found no effects in this area of the rainshadow zone referred to by Keesing, 1951 :6.

231 some toll on growth rates, size and length of life. Sows are quite prolific, however, and litters of 6 to 10 piglets which survive weaning are common. Boars are not numerous but it is claimed that the owner charges no fee for their services.

It is doubtful whether improved breeding and husbandry could [431] in themselves induce a significant increase in the consumption of meat by pig owners. Pigs are too scarce in this area to meet the existing demand and priority is given to the use of pigs for [435] distribution as pork at feasts or for gift exchanges. Very often neither a man nor his close kin have a suitable pig available when needed and in one such instance a price of £20 was set by the owner of a pig in another village.

Any person who aimed to establish a herd of significant numbers for commercial purposes would probably need to divorce himself as a participant from the network of exchanges which involve pigs.

e. Economic trees

245 Although the village is 23 miles from Gona on the coast and [131] over 1,000 ft above sea level, most economic trees are abundant. [133] The average household claimed 62 trees from which crops are gathered in season.[1] In order of numerical importance these were coconut, breadfruit, areca (betel) nut, sago, pandanus and tauga-nut (Cycas media) trees. Each household also owned one or two citrus, puga-nut (Terminalia okaria), mango or barkcloth trees. [137] Sago does not grow wild in this area as it does on more low-lying land, but numerous small creeks provide sites suitable for planting. The 93 sago trees owned by Jegase and Timumu people are sufficient to meet the intermittent demand for sago for distribution at large gatherings or during the occasional period when there are limited amounts of the more common crops ready to be harvested from the village's gardens. Whenever a tree is harvested the owner is expected to share the sago widely with the other villagers whether they are his agnates or not.

Most villagers had lived in several villages, some of which are now abandoned, and had planted coconuts there which they still claim. They usually had similar numbers scattered over parcels of land where they had gardened in the past. Sixty-two per cent of all trees had been planted on the patrimonial land of the [428] person claiming the trees. A man often plants trees while gardening on the land of affines or matrilateral kin and these trees are inherited by the planter's son.

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[1] These claims were not thoroughly investigated but their accuracy was checked on a number of sample parcels where householders claimed a specific number of trees of various kinds.

Chapter 1

The physical and social setting

This chapter summarises the physical and social background to current attitudes to cash cropping among the Orokaiva. 128

The physical environment

(a) Landforms (see Map 1)

Lying between the main New Guinea cordillera and the Pacific Ocean, the Popondetta sub-district[1] has a great variety of landforms and soils and, to a lesser extent, of vegetation.[2] Bounded on the south-west by the foothills of the Owen Stanley Range (4,000 ft) and on the south by Mt Lamington[3] and the Hydrographers Range (4,000 to 5,000 ft), the area comprises a broad plain sloping gently north-eastwards to the Pacific Ocean. Three elements may be distinguished within it: strongly dissected piedmont terraces, alluvial plains of volcanic materials (to the north-east of Mt Lamington) and flood plains from 10 to 25 miles wide extending from the terraces to the coast. All characteristically support primary or regrowth lowland forest except in the relatively drier and sandy areas, particularly on the plains north-east of Mt Lamington, where there are extensive stretches of grassland. 131 133 133 [137]

The CSIRO (Division of Land Research) considers (1964:17) that although there is more poor than good land in this area, 'some of the best land in the Territory' occurs on the gentle northern foot slopes of Mt Lamington and in parts of the flood plains where fertile volcanic soils and stratified sediments with a high organic content have developed. The major factors limiting land use are steepness of slopes in the mountain zone, and poor drainage and flooding in the lowlands. Soil deficiencies do not appear to be a serious limiting factor. 311 133

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[1] An area of 3,712 square miles.

[2] The following description is derived from CSIRO 1964:10-15.

[3] A volcano which last erupted in 1951, resulting in extensive destruction and loss of life.

Chapter 4

The two communities: Sivepe and Inonda

The villages of Sivepe and Inonda represent the extremes of population density, and therefore land availability, in the sub-district. There are significant differences between them in resources and in the degree and character of their participation in the monetary economy and their interactions with the principal external agencies.

Sivepe

Sivepe is situated 1,300 feet above sea level on the lower north-western slopes of Mt Lamington. Its land is classified by the CSIRO survey (1964:32) as belonging to the Awala Land System and is characterised by fertile loam topsoils and a close-textured drainage system. The vegetation comprises predominantly secondary forest and various stages of regrowth, with little grassland. The land-use potential is regarded as high and the fertile, well-drained soils are best suited for perennial (tree) crops.

The village is located in the most densely settled part of the sub-district, the Saiho census division, and there are eighteen villages within a radius of three miles (see Map 3). It has been on its present site for about ten years, but preparation of a new site, less than one mile away, was commenced late in 1964. Sivepe is twenty-eight miles from Popondetta by road, the last three miles being a little-used jeep track linking Awala with the villages on the lower slopes of Mt Lamington. Consequently, coffee and rubber have to be carried to Awala (or nearby Saiho) to be sold and purchases are normally made in the trade stores there. At Awala are a European rubber plantation, a rubber factory which purchases village latex and a well-stocked trade store. At Saiho are two trade stores, the principal Administration hospital for the Northern District (where medical orderlies and infant welfare nurses are trained) and a primary 'T' school. In mid-1964 a daily bus service was established between Saiho and Popondetta.

Also in mid-1964, several villages voluntarily commenced the construction of a new all-weather road, linking Sasembata mission

[TEXT CONTINUED ON PAGE 37]

133 moderately sloping foothills of the northern side of the extinct strato-volcanic Hydrographers Range. The Sambogo and Girua rivers flow in a northerly direction draining from the Hydrographers Range and Mt. Lamington respectively. They are swiftly flowing, rocky-bedded rivers which, together with their numerous tributaries, give the area a moderate to good drainage system. To the east the drainage system in the vicinity of the Embi lakes has been blocked by recent volcanic activity and drainage is much poorer. A vast coastal plain between twenty and thirty miles wide stretches north-westwards from the Hydrographers for over sixty miles. Inonda lies at the southern end of this plain, about fifteen miles inland from the coast.

134 Soils and vegetation: The Inonda lands are classified below on the basis of the soil associations set out in the Interim Report of the C.S.I.R.O. survey of the Kumusi River-Oro Bay area.(1)

[135] (i) The Popondetta Association covers approximately one third of the Inonda lands. Its soils characteristically have a black to very dark brown topsoil underlain by a yellowish grey volcanic sand subsoil and are usually moderately well drained. They are covered with kunai grass (predominantly Imperata sp.) or savannah and are not used by the people for food gardens because of the difficulty of freeing the ground from grass roots. Because the land is flat there may be some potential for mechanized farming on soils of the Popondetta Association, provided that their natural moderate fertility can be improved or at least maintained under cultivation.(2)

Associated with these soils are small areas of fine textured, recent, alluvial soils, usually covered with forest or

(1) C.S.I.R.O. (Land Research and Regional Survey Section) Interim Report on the Description and Assessment of the Land Systems and Soil Associations in the Kumusi River-Oro Bay Area, Northern Division, Papua, (Unpublished Record) 54/2. June, 1954.

(2) There is still some doubt as to the suitability of this soil for mechanized agriculture as there is a tendency for the soil structure to disintegrate under intensive cultivation.

194 regrowth. They are lower lying than the surrounding savannah and are poorly drained.

(ii) The Girua Association consists of coarse textured, recent riverine deposits covered with forest or regrowth. It lies beside the Sambogo and Girua rivers. The association covers about one fifth of the Inonda lands and, being permanently moist and apparently fertile, these soils are extensively used for food [829] gardening. The local people have given this soil type the name tumene.

(iii) The Warisota Association occurs on the lower slopes of the valleys of the Hydrographers Range, where the Sambogo river and its tributaries emerge from the foothills. The soils are recent, well drained, medium textured clay loams, becoming fine textured with depth, and being grey to grey-brown in [193] colour. They are covered with a heavy forest or secondary growth vegetation, but there is little accumulation of organic matter in the topsoil.

[241] These soils, which cover approximately one fifth of the Inonda lands, are used for food gardens, although they are not favoured because of their tendency to dry out during the dry [829] season. On the higher ground they are known to the Orokaiva as hora while on the lower ground they are known as hohori. The hohori runs into the still lower lying tumene of the Girua Association.

(iv) The Hydrographer Association lies in the deeply dis- [193] sected foothills of the Hydrographers Range. The soils of this association are shallow, stony and poorly differentiated, carrying a hill-type rain forest. They are not favoured for gardening and the people use this land only for foraging and hunting. Its agricultural potential has been assessed as "negligible"(1), as both topography and soils are unfavourable for the growth of crops. It occupies approximately one fifth of the total area of the Inonda land.

(1) Ibid, page 26.

134 (v) The Avalanche Association consists of riverine deposits of gravel and boulders interbedded with sheets of sand, lying on the floor of the Girua river. It occupies a very small proportion of the Inonda lands, supports a kunai vegetation, and appears to have no potential for either agriculture or forestry.

192 Climate: The climate is hot and moist, except for a hot, relatively dry season which lasts from about July to September. Because of the influence of the Owen Stanley Ranges there is a rapid west-east decline in rainfall over the Orokaiva area. Popondetta has an average annual rainfall of 96 inches so that Inonda, lying 5 miles to the east, probably has a rainfall of 80 to 90 inches. The yearly pattern of rainfall distribution, which is very similar for both Inonda and Popondetta, can be seen from the rainfall recordings for Popondetta given in Appendix C*(1)

805 824 The Inonda people refer to the dry season as huvira because the huvira tree (Erythrina indica) flowers at that time. The wet season is divided into a number of periods which are recognised by the ripening of various nuts (especially hauga) and edible pit-pit (ina), and by the flowering of the garepa tree. For instance, the garepa season begins about November or December and lasts for two or three months. These are the wettest months of the year and plant growth is therefore rapid at that time. The pasiro (a variety of pit-pit) ripens about March, which is a time of more moderate rainfall. Food is in abundance at this period, and it is accordingly the most popular season for feasting.

192 241 The warm moist climate is generally favourable for plant growth, but because many of the soils are coarse in texture and have low water-holding capacity, even short periods of drought may adversely affect the growth of shallow rooting crops (including the staple food, taro). Deep rooting crops such as coffee, cocoa and coconuts are less affected by the dry periods.

(1) This average was computed from recordings taken over the 7 year period 1955-61.

A [See Category 132, p. 100--Analyst]

Appendix B

The Ombi-Tara environment and population

131 Ombi village is in the Kokoda sub-district about twenty-seven
[133] miles from Popondetta along the main Popondetta-Kokoda road. It is situated on top of a plateau up a steep escarpment, about 250 yards from the main road. Tara is about two miles from Ombi and straddles the access road which runs through the converted land occupying part of two of the blocks. It was previously about two miles further away and was moved to its present site in 1964 after survey of the land to be converted was under way.

133 The Kumusi River flows close to the Popondetta-Kokoda road,
[361] about four hundred yards from Ombi village. Ombi village was formerly sited next to the river but was moved to its present higher location in about 1957, reportedly to escape the mosquitoes.

871 The nearest school is conducted by the Administration at Ajeka,
872 about two miles away. Most children of the appropriate age attend
[368] school daily. Several of the older children board at schools in Popondetta while some children do not attend school at all.

366 The nearest trade store is at Ajeka but this is seldom open,
438 and most purchases are made from the store operated by a European
439 planter at Awala, a distance of seven miles. Clothing and larger items are purchased in Popondetta.

134 The Ombi-Tara lands are part of the Higatura land system which contains a considerable proportion of good land with reasonably fertile soils, suitable for many arable or tree crops as well as pasture.[1]

132 The most important features of the climate are the generally
● 137 heavy rainfall, and the almost uniformly high temperatures and humidities throughout the year. Rainfall ranges from 120 to 150 inches annually and may well be greater in the higher areas, including Ombi-Tara. These climatic features are reflected in abundant plant growth. At Ombi-Tara rainforest covers much of the surrounding land, which is marked by a series of steep ridges.

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[1] See C.S.I.R.O. 1964.

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[A villager shows off the fighting head-dress of his father. It is intricately made of boar tusks, shells, feathers, and horn-bill beaks.]

THE YEGA OF NORTHERN PAPUA

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[161]

THE Yega is a group of nearly 900 people living in sixteen settlements, on an area of about twelve square miles, on the north coast of Papua. They live on a gently sloping alluvial plain between Mt Lamington and the sea. Yega territory is bounded by one large stream and crossed by several small creeks.

137 The plain was originally covered by mature rain forest 100-120 feet high, interspersed with elongated strips of grassland. Now, much of the original forest has been cut down, and secondary forest forty to fifty feet high has

132 replaced it. The climate is hot and wet throughout the year (Köppen Af.) but there is marked seasonality of precipitation. The north-west monsoon, November to April, brings two-thirds of the annual rainfall (average 100 inches per year); July and August with about four inches per month are relatively dry. The temperature is over 80°F on most days and rarely falls below 70°F on the coolest night, but the heat is alleviated by north-easterly sea breezes which blow during the afternoon and evening throughout the year.

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The first reported contact between Europeans and Yega was during an expedition along the coast by the Lt Governor of Papua, Sir William McGregor, in 1893, but the first real step in the process of change occurred with the establishment of an Anglican mission school on Waususu Point in 1909. From this

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time until the outbreak of World War II, Yega men began leaving their villages to work

466 [P.5-A]

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Fig. 4. Yega territory. Sopora Village and school in foreground. Light grey patches are grassland; patches of mature rain forest can be easily distinguished from the lower secondary growth

[P.8-A]

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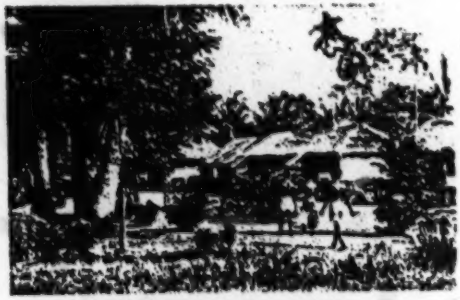

Fig. 10. *Scene in Bepore village. In left foreground are coconut palms. The tall slender palms behind the houses produce areca nuts, one of the ingredients of betelnut*

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Fig. 11. *The new village of Onanda under construction near the cocoa blocks five miles from the coast. (Picture taken in January 1962.)*

[P-13-B]

18: Dakeyne K-5 (1962-1964) 1969
OJ23 Orokaiva OJ23
Yega

BOTANICAL NAMES OF COMMON FOOD PLANTS

137
262

Banana	— *musa* (spp.)
Cassava	— *manihot* (spp.)
Coconut	— *cocos nucifera*
Sago	— *metroxylon sagu*
Sweet Potato	— *ipomoea batatas*
Taro	— *colocasia esculenta*
Taro Kong Kong	— *xanthosoma* (spp.)
Yam	— *dioscorea* (spp.)

[P.40-A]